Acute HIV Infection

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ACTHIV 2011: A State-of-the-Science Conference for Frontline Health Professionals
Learning Objectives:

At the conclusion of this presentation, learners should be better able to:

- Recognize and diagnose acute retroviral syndrome.
- Discuss the pros and cons of antiretroviral treatment during acute and early HIV infection with their patients.
Case: Romance

USA - California - Southern CA San Diego - Western - North Park

Contact

Profile

No Headline

29, 5’10”, 160lb, 31w, Athletic, Brown Hair, Some Body Hair, White, Looking for Friendship, 1-on-1 Sex, Relationship.

Checking things out. Normal athletic guy looking for the same.

Smoke No, Drugs No,

HIV Negative, Prefer meeting at: My Place.

USA - California - Southern CA San Diego - Western - Hillcrest

Contact

Profile

34, 6’2”, 190lb, 33w, Athletic, Brown Hair, Some Body Hair, White, Looking for Friendship, 1-on-1 Sex, Relationship.

still relatively new to sd. looking for new friends, dates, fun, etc....

Bottom, Safe Sex Only, HIV Negative,
Disclosure as a Prevention Strategy

Does partner serostatus disclosure protect people from HIV infection?

1. Yes
2. No
3. Maybe
Do they ask each other’s HIV status?

<table>
<thead>
<tr>
<th>Disclose of Serostatus by Your Partner in the Network</th>
<th>Risk of HIV Acquisition per act with one ‘randomly’ chosen Partner</th>
</tr>
</thead>
<tbody>
<tr>
<td>“HIV-” Low Risk Population</td>
<td>23.5 in a million</td>
</tr>
<tr>
<td>“HIV-” High Risk Population</td>
<td>412.5 in a million</td>
</tr>
<tr>
<td>“HIV+”</td>
<td>395 in a million</td>
</tr>
</tbody>
</table>

When the prevalence of recently HIV-infected individuals in the high-risk population is 4%, there is 17x less risk of acquiring HIV from a member of the group disclosing as HIV positive.

Butler DM and Smith DM. AIDS 2007
Implementation of HIV Testing at 2 New York City Bathhouses: From Pilot to Clinical Service

Demetre Daskalakis,1,5 Richard Silvera,2 Kyle Bernstein,1 Dylan Stein,2 Robert Hagerty,2 Richard Hutt,2 Alith Maillard,2 William Borkowsky,3,5 Judith Aberg,1,5 Fred Valentine,1,3,4 and Michael Marmor2

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Background. Commercial sex venues (e.g., bathhouses) that cater to men who have sex with men (MSM) continue to function in most urban areas. These venues present a challenge to developing strategies to prevent the spread of the human immunodeficiency virus (HIV), but they also provide opportunities for interventions to reduce the risk and rate of disease transmission. Several cities in the United States have developed programs that offer HIV testing in these venues. Similar programs have not existed before in New York City.

Methods. A pilot HIV testing program was implemented at 2 New York City bathhouses. Testing included rapid HIV testing, the use of the serologic testing algorithm for recent HIV seroconversion, and pooled plasma HIV viral load to detect and date incident and acute HIV infections. In addition to HIV tests, behavioral and demographic data were collected from 493 presumed HIV-negative participants.

Results. The pilot program recruited MSM who were at high risk for HIV infection. Of the 493 men tested, 20 (4%) were found to be positive for HIV, and 8 (40%) of these 20 men demonstrated evidence of acute or recent HIV infection. The program tested men often not tested in more traditional medical settings. Significant disparities were demonstrated in the testing habits of MSM who reported having sex with women and had not disclosed same-sex activities to their caregivers.

Conclusions. Bathhouse-based testing for HIV infection can be implemented in New York City and would include a population of MSM who are at high risk for HIV infection. Because of the high rate of recent HIV infection, expanded testing in these venues may be a good strategy to reduce the forward transmission of HIV in this highly sexually active population.
Case Report: Panic

- SDStudly is a 34 yo man who presents to the Gay Men’s Health Clinic.
- He reported an unprotected HIV exposure 32 hours previous where he was the bottom.
- Now he is worried because his male partner just disclosed to him that he was HIV+ and receiving ART (after the fact).
- He reports: mild sore throat, fever and full body rash including palms and soles.
What do you do? (Pick Two)

A. Provide TDF/FTC as PrEP
B. Provide LPV/r/TDF/FTC as PEP
C. Order a viral load
D. Test for STDs including syphilis and GC and Chlamydia at three sites: urethral, rectal and pharyngeal and treat presumptively for syphilis

1. A+C
2. A+D
3. B+C
4. B+D
How do you diagnose acute HIV infection?

1. Rapid Antibody Test
2. Nucleic Acid Test
3. Both
Model of Primary Infection Dynamics

Rapid HIV +

Window Period

IgG EIA

WB

Model of Primary Infection Dynamics

NAT HIV +

Rapid HIV +

Weeks

Months

Window Period

Case Report: Wait

- He was given an Rx for PEP
- Treated for syphilis presumptively and tested for GC/Chalm at three sites, RPR and rapid HIV
- Rapid HIV negative
- Two days later his RPR was positive and GC was positive in his throat, which was treated.
- He was told to come back in one month for re-testing for HIV.
Case Report: Later

- He reports not obtaining PEP because it was not covered by his insurance.
- Patient returns to clinic 2 months later for repeat HIV testing.
- Standard HIV testing is now positive.
- He reports having 4 new sexual partners since last coming in the clinic.
- Contact tracing finds 2 of them and the original partner.
Transmission Chain

Source → Index

Index → Recipient 1

Index → Recipient 2

HIV at 2 weeks

2 months

HIV

Phylogenetically Linked Transmissions
Blood Viral Loads

Which are not in the differential diagnosis of primary HIV infection?

1. Acute EBV
2. Acute CMV
3. Acute Toxoplasmosis
4. Acute HAV
5. Strep Throat
6. Flu
7. None of the above
Primary HIV Infection

- Period of rapid viral replication immediately following exposure
- Symptomatic syndrome in 30-96%

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fever</td>
<td>96%</td>
</tr>
<tr>
<td>LAD</td>
<td>74%</td>
</tr>
<tr>
<td>Pharyngitis</td>
<td>70%</td>
</tr>
<tr>
<td>Rash</td>
<td>70%</td>
</tr>
<tr>
<td>Myalgia/arthralgia</td>
<td>54%</td>
</tr>
<tr>
<td>Diarrhea</td>
<td>32%</td>
</tr>
<tr>
<td>Headache</td>
<td>32%</td>
</tr>
<tr>
<td>N/V</td>
<td>27%</td>
</tr>
<tr>
<td>HSM</td>
<td>14%</td>
</tr>
<tr>
<td>Wt loss</td>
<td>13%</td>
</tr>
<tr>
<td>Thrush</td>
<td>12%</td>
</tr>
<tr>
<td>Neuro Sx</td>
<td>12%</td>
</tr>
</tbody>
</table>

- Seroconversion typically within 50d

To Friends Who Are Not Here